

CLAIMS

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1. A data transmission and reception method in which data transmitted from a transmitting end is received, on the basis of a reception contract, with plural receivers which have individual ID numbers and belong to the same group, wherein said transmitting end assigns the same group ID number to the plural receivers, and manages the reception contract on the basis of the individual ID numbers or the group ID number.
 2. A data transmission and reception method as described in Claim 1, wherein said reception contract is updated at regular time intervals.
 3. A data transmission and reception method as described in Claim 1, wherein:
said data includes video, audio, and data which are transmitted by a data stream in digital broadcasting; and
said reception contract is that a predetermined accounting is performed for a predetermined portion of the data stream which has been viewed for a predetermined period of time.
 4. A data transmission and reception method as described in Claim 3, wherein said portion of the data stream is a service (channel).
 5. A data transmission and reception method as described in Claim 1, wherein the content of the reception contract includes services which can be viewed at the receiving end and the term of

the contract, and they are multiplexed in the data stream to be transmitted to the receiving end.

6. A data transmission and reception method as described in Claim 4, comprising:

a first individual ID number notification step of notifying the transmitting end of the individual ID number which is possessed by a first receiver amongst the plural receivers belonging to the same group;

a contract information notification step of notifying the transmitting end of ID information for identifying a service with which the first receiver makes a reception contract;

an additional individual ID number notification step of notifying the transmitting end of the individual ID number of at least one additional receiver which belongs to the same group as the first receiver, and information indicating that this additional receiver and the first receiver belong to the same group;

a group ID number assignment step of assigning, by the transmitting end which has received the notification, the same group ID number to the first receiver and the additional receiver; and

a contract information input step of inputting the ID information of the service with which the first receiver has made the reception contract, into the additional receiver.

7. A data transmission and reception method as described in

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Claim 6, wherein:

the first individual ID number notification step includes a step of notifying the transmitting end of a telephone line number connected to the first receiver;

in the additional individual ID number notification step, the additional receiver belongs to the same group as the first receiver and is connected to the same telephone line as that connected to the first receiver; and

said method further including:

an ID number notification step in which the respective receivers notify the transmitting end of their individual ID numbers and the group ID number, through the telephone line connected to the receivers, at predetermined time intervals; and

a number collation step in which, at the transmitting end, the individual ID numbers of the plural receivers belonging to the same group and the group ID number, which are notified through the telephone line at predetermined time intervals, are collated with the individual ID numbers, the group ID number, and the telephone line number which have already been registered at the transmitting end.

8. A data transmission and reception method as described in

Claim 6 ~~or 7~~, wherein the contract information input step is inputting the ID information of the service with which the first receiver has made the reception contract, the ID information being transmitted from the transmitting end.

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9. A data transmission and reception method as described in Claim 7 further including a warning step of sending a warning from the transmitting end to the receiving end when the notified numbers do not match the registered numbers in the collation step.

10. A data transmission and reception method as described in Claim 6 ~~or 7~~ wherein, in the group ID number assignment step, the group ID number is multiplexed in the data stream together with video and audio to be transmitted to the receiver.

11. A data transmission and reception method as described in Claim 10, wherein the group ID number is stored in CA (Conditional Access) EMM (Entitlement Management Message) of the data stream to be transmitted.

12. A data transmission and reception method as described in Claim 6 ~~or 7~~, wherein the group ID number is transmitted through a transmission path different from the data stream, to the receiver.

13. A data transmission and reception method as described in Claim 3, wherein the portion of the data stream is an event (program).

14. A data transmission and reception method as described in Claim 13 comprising:

a first individual ID number notification step of notifying the transmitting end of the individual ID number which is possessed by the first receiver amongst the plural receivers which belong to the same group;

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an additional individual ID number notification step of notifying the transmitting end of the individual ID number of at least one additional receiver which belongs to the same group as the first receiver, and information indicating that this additional receiver and the first receiver belong to the same group;

a group ID number assignment step of assigning, by the transmitting end which has received the notification, the same group ID number to the first receiver and the additional receiver; and

a result-of-viewing notification step in which, when an event (program) has been viewed with the plural receivers which belong to the same group and have the same group ID number, the transmitting end is notified of the individual ID numbers of the plural receivers, the group ID number thereof, and information specifying the event (program) which has been viewed.

15. A data transmission and reception method as described in Claim 14, wherein the information specifying the event (program) includes a program ID number for identifying the event (program).

16. A data transmission and reception method as described in Claim 14, wherein the group ID number assignment step includes a step of outputting information which indicates that either receiver-unit accounting or group-unit accounting is to be applied to each event (program).

17. A receiver used for a data transmission and reception method

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in which a data stream transmitted from the transmitting end is received by plural receivers which have different individual ID numbers and belong to the same group, on the basis of a reception contract, and the transmitting end assigns the same group ID number to the plural receivers and transmits information about the reception contract for the group ID number or for the individual ID number, and manages the contract including accounting, in units of groups or receivers, said receiver comprising:

storage means for storing the group ID number transmitted from the transmitting end;

demultiplexing means for extracting the information about the reception contract, from the transmitted data stream;

control means for analyzing the extracted information about the reception contract to recognize a receivable service, and instructing the demultiplexing means to extract key information for descrambling the receivable service, from the data stream, thereby obtaining the key information; and

decoding means for descrambling the receivable service from the data stream, under control of the control means, on the basis of the information including the recognized receivable service and the extracted key information.

18. A receiver used for a data transmission and reception method in which a data stream transmitted from the transmitting end is received by plural receivers which have different individual ID

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numbers and belong to the same group, on the basis of a reception contract, and the transmitting end assigns the same group ID number to the plural receivers, and manages the reception contract including accounting, in units of groups or receivers, said receiver comprising:

storage means for storing the group ID number transmitted from the transmitting end;

demultiplexing means for extracting the history of viewing which includes at least accounting information of an event (program) which has been viewed and information specifying the event (program), from the transmitted data stream;

card means for storing the extracted history of viewing; and

card interface means for transmitting the stored history of viewing, and the individual ID number and the group ID number possessed by the receiver, to an external management center.

a 19. A receiver as described in Claim 17 ~~or 18~~ further comprising ID number notification means for notifying the transmitting end of at least the individual ID number and the group ID number of the receiver, through a telephone line connected to the receiver, at predetermined time intervals.

The transmitting end assigns the same group ID number (IRD_Gr_ID) to a plurality of receivers which have individual ID numbers (IRD_ID), belong to the same group, and receive data from the transmitting end on the basis of a reception contract, and the transmitting end manages the reception contract on the basis of the individual ID numbers (IRD_ID) and the group ID number (IRD_Gr_ID).